"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 024 UNCLASSIFIED PROCESSING DATE--30OCT70
IRC ACCESSION NO--AP0123987
STRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIENCE OF ORGANIZATION OF HELMINTHIC DISEASES CONTROL IN THE ROVNO AND CHERNOVTSY REGIONS OF THE UKRAINIAN SSR WAS STUDIED. STATE SANITARY CONTROL OF THE SANITARY CONDITIONS IN RURAL COMMUNITIES IS WELL ORGANIZED, OWING TO WHICH AND TO REGULAR DEHELMINTHIZATION MEASURES THE INFESTATION RATE OF ASCARIASIS HAS BEEN REDUCED CONSIDERABLY IN A NUMBER OF AREAS. HELMINTHIC DISEASE CONTROL MEASURES ARE PLANNED FOR EACH SETTLEMENT. A CONSIDERABLE ROLE IN THEIR ORGANIZATION IN THE VILLAGE BELONGS TO SANITARY FELDSHER OF THE DISTRICT HOSPITAL. A NUMBER OF METHODS FOR BETTER ORGANIZATION OF HELMINTHIC DISEASES CONTROL. PARTICIPATION OF RURAL COUNCILS IN REALIZATION OF SANITARY MEASURES, GREATER ENLISTING COOPERATION OF RURAL MEDICAL WORKERS AND PUBLIC SANITARY WORKERS IN CONTROL OF SANITARY CONDITIONS ESPECIALLY OF DESINFECTION OF FECAL FERTILIZERS, COMBINATION OF HELMINTHIC DISEASE CONTROL MEASURES AND MEASURES FOR CONTROL OF ENTERIC INFECTIONS, ETC. FACILITY: INSTITUT MEDITSINSKOY PARAZITOLOGII I TROPICHESKOY MEDITSINY IM. MARTSINOVSKOGO. FACILITY: KIYEVSKIY INSTITUT EPIDEMIOLOGII, MIKROBIOLOGII I PARAZITOLOGII. FACILITY: ROVENSKAYA OBLASTNAYA I GORODSKAYA SANITARNO EPIDEMIOLOGICHESKIYE STANTSII.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

UDC: 537.312.62

GOLOVASHKIN, A. I., LEVCHENKO, I. S., MOTULEVICH, G. P.

"Electronic Characteristics of Sputtered Alloys of Indium With Gallium"

Moscow, Sverkhprovolyashchiye splavy i soyedin.--sbornik (Superconductive Alloys and Compounds--collection of works), "Nauka", 1972, pp 28-29 (from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12D538 [résumé])

Translation: A new method is developed for making superconductive vanadium--gallium compounds with high critical parameters -- transition temperature T_c and current density j_c -- which are practically independent of the alloy composition over a wide range of concentrations. The following electronic characteristics of the resultant alloys are measured by the optical method: conduction electron concentration, total area of the Fermi surface, average velocity of electrons on the Fermi surface, effective frequency of electron collisions, the Fourier components of the pseudopotential. A certain correlation is established between T_c on the one hand and the conduction electron concentration and frequency of electron-phonon collisions on the other hand. Six illustrations, one table, bibliography of sixteen titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

UDC: 537.312.62

GOLOVASHKIN, A. I., LEVCHENKO, I. S.

"Making Superconductive Alloys by the Method of Separate Sputtering in a Vacuum"

Kratkiye soobshch. po fiz. (Brief Reports on Physics), 1972, No 6, pp 56-[illegible]
(from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12B540 by V. O.)

Translation: V-In-Ge alloys were made by simultaneous vacuum sputtering of vanadium with a mixture of indium and germanium from different atomizers. The substrates were polished ruby plates and rods which were heated to 500°C. The rate of alloy condensation was 2 nm/s. The sputtered layers were annealed in a vacuum of $2 \cdot 10^{-6}$ mm Hg for one hour at 600°C. Increasing the annealing temperature reduced the T_c of the specimens. Studies were made of alloys in which the ratio of atomic concentrations of indium and germanium was 4:1, since valence considerations suggest maximum T_c in the compound $V_3In_{0.8}Ge_{0.2}$. The T_c was determined by the resistive method. The T_c of alloys $V_xIn_{0.8}Ge_{0.2}$ with a reduction in vanadium concentration had a maximum of 8.1°K for an alloy with x = 2 (the vanadium concentration being equal to 45%). The thickness of the specimens was 0.85-1 μm. The thick-

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GOLOVASHKIN, A. I., LEVCHENKO, I. S., Kratkiye soobshch. po fiz., 1977, No 6, pp 56-61

ness of a specimen with maximum T_c was about 0.7 μm. The width of the transition interval was 0.1-1°K. A change in the ratio of concentrations of In and Ge in the alloy away from the quantity 4:1 led to a reduction in T_c. To determine the part played by germanium, V-In "alloy" specimens were also made. Most of these had T_c = 3.2-3.4°K, which is close to T_c for pure indium. Two illustrations, bibliography of 11 titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 547.962

USSR

LIKHTENSHTEYN, G. I., FROLOV, YE. N., KESHAYKO, N. F., LEVCHENKO, L. A., and SKLYAR, YU. S., Institute of Chemical Physics, Academy of Sciences USSR Moscow

"An Investigation of the Structure of a Modeled Iron-Sulfur Protein by the Method of Spin and Luminescence Labels"

Moscow, Molekulyarnaya Biologiya, Vol 6, No 2, Mar/Apr 72, pp 201-209

Abstract: The research described in the present article concerned the problem of the mutual arrangement and interaction of iron ions in iron-sulfur proteins. Artificial iron-sulfur proteins, synthesized from human serum albumin, were analyzed by the method of spin and luminescence labels, with the aid of an electron microscope, paramagnetic nuclear gamma-resonance, and analytic ultracentrifugation in the density gradient. The spin label method is based on the specific reaction of the iron- and sulfur-containing centers of the given proteins with a paramagnetic iminoxyl derivative of n-chlormercurobenzoate. The luminescence labels method is based on the phenomenon of the migration of energy via an inductive-resonance mechanism between luminescence donor centers and luminescence-extinguishing acceptor centers. The results obtained by both methods indicate that the iron ions do not act as individual active centers, but instead form a

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USSR

LIKHTENSHTEYN, G. I., et al., Molekulyarnaya Biologiya, Vol 6, No 2, Mar/Apr 72, pp 201-209

polynuclear complex which participates in catalysis as a single unit. This appears to be an extremely general characteristic of nonheme enzymes and carriers.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--POSSIBLE INCREASE IN THE INTENSITY OF SPECTRAL LINES BY CREATING FAVORABLE EXCITATION CONDITIONS -U-

AUTHOR--LEVCHENKO, M.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UZHEB. ZAVED., FIZ. 1970, 13(2), 125-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SPECTROSCOPIC ANALYSIS, TIN, GERMANIUM, COPPER, LITHIUM, ZINC, HIGH TEMPERATURE EFFECT, SPECTRAL LINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0959 STEP NO--UR/0139/70/013/002/0125/0128

CIRC ACCESSION NO--AT0105828

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AT0105828

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INTENSITY OF THE SPECTRAL LINES OF SN, GE, CU, LI AND ZN IN AN ARC DISCHARGE COULD BE INCREASED LESS THAN OR EQUAL TO 24 TIMES BY COMPRESSING THE ARC AND THEREBY RAISING THE TEMP. FROM 5000-6000DEGREES TO 8000-8000DEGREESK.

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USSR UDC595.771-12:616.9-036.2

DUBITSKIY, A. M., DESHEVYKH, N. D., LEVCHENKO, N. G., and DAUBEKOV, A. YE., Institute of Zoology, Academy of Sciences, Kazakh SSR

"A Method of Studying Natural Epizootics of Blood-Sucking Mosquitoes"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, No 6, 1971, pp 701-704

Abstract: To use pathogens as a means of controlling parasites and pests requires familiarity with the natural course of epizootics among them. Since disease of mosquito larvae generally have a mosaic structure, different habitats must be investigated. Larvae should be sampled from six characteristic types of sections of ponds (open, shaded, overgrown with aquatic vegetation, not overgrown, deep shallow). Mosquitoes are collected from a number of sites relatively close together to determine the degree of infestation or infection and then inspected and dissected to assess the intensity of the disease. The procedure should be repeated every month throughout the year to study seasonal patterns. Analysis of the results of investigations of the different segments of a single infected population gives some idea of the distribution, lethality and phase of the disease in which the larvae die. The initial symptoms of the disease, their development, and increase in severity combined with the subsequent death of a certain number of

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USSR

DUBITSKIY, A. M., et al., Meditsinskaya Parazitologiya I panazitarnyye Bolezni, No 6, 1971, pp 701-704

individuals of the population, make it possible to determine the course and severity of the disease.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

UDC 576.893.195.095.38:576.895.771(574)

LEVCHENKO, N. G., DUBITSKIY, A. M., and DESHEVYKH, N. D., Institute of Zoology, Academy of Sciences, Kazakh SSR

"Detection of Microsporidia in Larvae of Blood-Sucking Mosquitoes in Southeastern Kazakhstan (a Preliminary Report)"

Moscow, Meditsinakay Parazitologiya i Parazitarnyye Bolezni, No 5, 1971, pp 619-620

Abstract: Microsporidians were found for the first time in the larvae of some mosquito species along the middle and upper reaches of the Ili River in Kazakhstan: Thelohania opacita in Aedes montchadskyi and A. flavescens and Thelohania legeri in Anopheles hyrcanus. The species of microsporidians found in Aedes caspius caspius and Culex modestus larvae has not yet been conclusively determined. Diseased larvae generally were found in shallow bodies of water where the temperature was over 15°C. The protozoans are now being investigated as a possible means of controlling mosquitoes.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR UDC 621.372:621.318.134:621.385.6

LEVCHENKO, S.I., LITVINOVA, I.V.

"Periodic Magnetic Focusing Systems Of Comb-Shaped Type"

Elektron. tekhnika. Nauchno-tekhn. sb. Ferrit. tekhn. (Electronics Technology. Scientific-Technical Collection. Ferrite Technology), 1970, No 2(24), pp 49-53 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12A181)

Translation: An improvement is presented of the method of computation of a periodic magnetic focusing system of comb-shaped type, and several variations of periodic magnetic focusing systems are computed. 1 ref. Summary.

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Acc. Nr: AT0049879 Abstracting Service: CHEMICAL ABST. 5/10 Ref. Code: 4R00020

100859s Metalation of dibenzenechromium and some of its homologs. Nesmeyanov, A. N.; Yur'eva, L. P.; Lovchenko, S. N. (Inst. Elementoorg. Soedin., Moscow, USSR). *Dokl. Akad. Nauk SSSR* 1970, 190(1), 118–21 (Chem) (Russ). Treating 4.3 g BuLi in $(CH_2NMe_2)_2$-hexane over 1 hr with 0.67 g dibenzenechromium (I), refluxing 2 hr, and adding 10.7 ml MeI with ice cooling gave a small amt. isomeric xylenes, MePh, and 1,2,4- and 1,3,5-$Me_3C_6H_3$; a similar reaction with (ditoluene-chromium (II) and di-*m*-xylenechromium (III) gave similar results. The 1st Li atom enters only the benzene ring and the Me group is unaffected in reaction of II; the 2nd Li atom enters the benzene ring predominantly also, but some of it does attack the Me group, yielding 1,2,4- and 1,3,5-$Me_3C_6H_3$ as well as isomeric methylethylbenzenes. The Me group directs the Li atom to *m*- and *p*-positions of the ring. In reaction of III the 1,3,5-isomer is formed predominantly also. G. M. Kosolapoff

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

UDC 541.183.5

KOGANOVSKIY, A. M., LEVCHENKO, T. M., KIRICHENKO, V. A., Institute of Colloidal and Water Chemistry, Academy of Sciences Ukrainian SSR

"Procedure for Calculating the Magnitudes of the Standard Decrease in Free Energy of Adsorption on Activated Charcoal from Aqueous Solutions"

Kiev, Ukrainskiy Kimicheskiy Zhurnal, Vol XXXVII, No 5, 1971, pp 506-507

Abstract: Two methods of calculating the concentrations of the substance in the adsorption layer were investigated. The methods are based on determining the specific surface of the adsorbent and the volume of the micropores. The variation of the magnitude of $\lg C_{ads}/C_{equil}$ is plotted as a function of C_{equil} for adsorption of benzene, phenol and analine on activated charcoal from aqueous solutions with respect to the magnitude of the specific surface and the volume of the micropores, where C_{ads} is the concentration of substance in the adsorption layer of the activated charcoal. The advantage of the first method over the second is that when calculating the surface concentration by the first method, in addition to the experimentally defined magnitude of the specific adsorption, it is necessary to know only the area occupied by a molecule of the substance in the adsorption layer which is found by a projection of the molecule on the plane executed considering the van der Waals

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USSR

KOGANOVSKIY, A. M., et al., Ukrainskiy Khimicheskiy Zhurnal, Vol XXXVII, No 5, 1971, pp 506-507

radii of the atoms. By the second method it is necessary precisely to know the specific weight of the solid substances at their melting point.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR UDC: 541.183.5

KOGANOVSKIY, A. M., LEVCHENKO, T. M., and KIRICHENKO, V. A., Institute of Colloidal Chemistry and Chemistry of Water, Academy of Sciences USSR

"Adsorption of Heterocyclic Compounds on Carbon Adsorbents From Water Solutions"

Kiev, Ukrainskiy Khimicheskiy Zhurnal, Vol 36, No 4, Apr 1970, pp 339-342

Abstract: The authors studied adsorption of pyrazolones on ashless carbon TAD with specific surface area of 670 m^2/g, and report the adsorption isotherms obtained, from which they conclude that pyrazolone molecules orient themselves by the planes of both rings parallel to the phase separation during adsorption. The values for standard decrease of the free energy of pyrazolone adsorption and their increments per pyrazolone ring have been calculated: for pyrazolone ring it amounts to +0.13 Kcal/mole, for the antipyrine ring --- -1.05 Kcal/mole. The low values of these increments are judged to be due to a shift of the electron density and appearance of charges in case of the antipyrine ring, this being supported by its higher solubility in water (340 g/l at 20°).

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR UDC 621.372.82

LEVCHENKO, T. V. and TIMOFEYEVA, N. G.

"Studying the Solution Accuracy of Waveguide Problems Using the Galerkin Method"

Tr. Mosk. in-ta radiotekhn., elektron. i avtomatiki (Works of the Moscow Institute of Radio Engineering, Electronics and Automation), 1972, vyp.55, pp 75-86 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 B82)

Translation: Using the example of the problem associated with a rectangular waveguide with total filling longitudinally along its height, the authors study solution accuracy using the Galerkin method by comparing approximate solutions to a closed analytical solution. The closed analytical solution can be obtained with any degree of accuracy for the constants of propagation for the basic type of wave and corresponding projection coefficients. Original article: two tables. N.S.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR UDC: 681.3

KAGANOV, S., LEVCHENKO, V., PECHERSKIY, B.

"Some Problems of Organizing Commands for Exchange of the M-220 Computer With a Communications Line"

V sb. Elektronno-vychisl. tekhn. i programmir. (Computer Technology and Programming--collection of works), vyp. 3, Moscow, "Statistika", 1970, pp 57-62 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V696)

Translation: Requirements are formulated for these commands, their structure is hypothesized and exchange algorithms are formulated. Organization of the operation of the exchange commands is described under conditions of reception and transmission of information. Authors' abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

UDC 681.325

TURCHENKOV, L. P., LEVCHENKO, V. I.

"Display Device"

USSR Author's Certificate No 311262, filed 21 Oct 69, published 3 Nov 71 (from RZh-Avtomatika, Telemekhanika i vychislitel'naya tekhnika, No 4, Apr 72, Abstract No 4A475P)

Translation: A display device is proposed which contains a unit for comparing the instantaneous values of the sawtooth voltage with a constant reference voltage, a reference pulse generator, pulse shapers for shaping pulses of different length, a flip-flop, a univibrator, comparison circuit, an inhibitor and setup (OR) circuit, a light display, and commutators. In order to insure visual display of the nature of the nonlinearity of the sawtooth pulses directly connected with the nature of the time mismatch of the comparison pulses with respect to the reference pulse, the outputs of the comparison unit and the reference pulse generator are connected separately to the shapers; identical outputs of the latter are connected to the inputs of the responding flip-flop connected to the AND circuit and to the inputs of the univibrator start circuit connected by one output to the AND circuit and by the other to the first input of the inhibitor. The output of the AND circuit is connected to the second input of the inhibitor and to the OR circuit; the second input of the latter is connected to

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

TURCHENKOV, L. P., et al., USSR Author's Certificate No 311262, filed 21 Oct 69, published 3 Nov 71

the output of the inhibitor, and the output of the OR circuit is connected via the commutator, connected to the comparison unit and the reference pulse generator, to the flip-flop cells of the light display. There are 3 illustrations.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

UDC: 681.327

GREBENYUK, O. T., LEVCHENKO, V. N., ROVNER, I. A.

"Device for Copying from Punch Tape to Punch Cards"

Obmen opytom v radioprom-sti (Exchange of Experience in the Radio Industry), Vyp. 4, Moscow, 1970, pp 47-48 (from RZh-Avtomatika, Telemekhanika i vychislitelnaya tekhnika, No 9, Sep 70, Abstract No 9B486)

Translation: This article contains a study of a device for copying from punch tape to punch cards which permits automatic and remote punching of punch cards in accordance with the information read from the punch tape. The device is designed for use in the Ural 11-B digital computer. There is one illustration.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 014 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--SCIENTIFIC RESEARCH CENTER FOR TESTING HIGH VOLTAGE APPARATUS -U-

AUTHOR-(03)-LEVCHENKO, V.T., STEKOLSHCHIKOV, A.A., AGAPOV, S.N.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, ELEKTRICHESKIYE STANTSII, NR 3, MAR 70, PP 78-81

DATE PUBLISHED----MAR70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--CIRCUIT DESIGN, ELECTRIC SWITCH/(U)VV2 ELECTRIC SWITCH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1980/0814 STEP NO--UR/0104/70/000/003/0078/0081

CIRC ACCESSION NO--AP0105719

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 014 UNCLASSIFIED PROCESSING DATE--07 OCT 70

CIRC ACCESSION NO--AP0105719

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A TYPE VVZ-12 10 KV (MAXIMUM VALUE) PROTECTIVE SWITCH FOR INTERVAL INSTALLATION, PRODUCED BY THE LENINGRAD PLANT "ELEKTROAPPARAT", IS PART OF THE ELECTRICAL CIRCUIT OF THE SCIENTIFIC RESEARCH CENTER FOR TESTING HIGH VOLTAGE APPARATUS. IT IS USED AS A PROTECTIVE SWITCH DURING THE TESTS. THE SWITCH IS A COMPLEX OF THREE SEPARATE POLES AND TYPE SHRPF-3 DISTRIBUTION HEADS CONNECTED PNEUMATICALLY IN A SINGLE UNIT. MODERNIZATION OF THE VVZ-12 SWITCH ELIMINATED DEFECTS DEVELOPED IN OPERATION, INCREASED THE RELIABILITY OF OPERATION, THE USEFUL LIFE, AND THE ECONOMY OF OPERATION. THE AIR BLAST VALVE AND THE BASIC ARC QUENCHING CHAMBER UNDERWENT MODERNIZATION. THE PROCESS OF MODERNIZATION IS DISCUSSED IN DETAIL AND IS ILLUSTRATED WITH FOUR DETAILED DRAWINGS KEYED TO THE EXPLANATION.

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USSR

UDC 532.501.34+532.517.2

LEVCHENKO, V. YA., and SOLOV'YEV, A. S.

"Stability of the Boundary Layer on an Undulant Surface"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Zhidkosti i Gaza, No 6, Nov-Dec 72, pp 11-16

Abstract: An investigation is made of stability with respect to small perturbations of flows, the velocity of which depends upon a space coordinate directed along the current. Calculations of stability are conducted for the case where the velocity distribution is obtained through the solution of boundary-layer equations. The primary flow dealt with here is the one discussed by H. Goerstler in 1947 and 1948, which is periodic with respect to the longitudinal coordinate x in the boundary layer above a weakly undulant surface. In the case of undulant walls, frequently encountered in technical applications, solution of the problem permits quantitative estimates to be made of the influence of surface undulancy upon the stability of the laminar boundary layer, 4 figures, 6 references.

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Industrial

USSR

UDC 531.8

LEVCHENKO, YE. K.

"On the Dynamics of Short-Cone Crushers"

Tr. Noril'skogo vech. industr. in-ta (Works of the Noril'sk Industrial Night Institute), 1970, sb. 5, pp 157-163 (from RZh-Mekhanika, No 9, Sep 70, Abstract No 9A198)

Translation: The paper deals with determination of dynamic conditions in the elastic elements of short-cone crushers in the start-up period, assuming that the electric motor has a constant torque. A differential equation of motion is first set up for the crushing cone, and the result is then substituted in the equations for a two-mass computational scheme. Author's abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

Organophosphorus Compounds

UDC 547.269.352:546.185

USSR

LEVCHENKO, YE. S., BUDNIK, L. V., Institute of Organic Chemistry, Academy of Sciences of the Ukrainian SSR

"Derivatives of Iminosulfuric Acid: 1. Reaction of Dialkylamides of N-Phosphonyl Substituted Sulfamic Acid with Phosphorus Pentachloride"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 6, No 11, Nov 70, pp 2239-2243

Abstract: Dialkylamides of N-phosphonyl substituted sulfamic acid Alk_2NSO_2NHPOX (where X = Cl, $OC_6H_4NO_2$-p) are treated with phosphoruc pentachloride to produce dialkylamido-N-phosphonyl substituted iminosulfuryl chlorides of the type $Alk_2NS(=O)(=NPOX_2)Cl$. The resultant dialkylamido-N-dichlorophosphonyliminosulfuryl chlorides (II) and dialkylamido-N-di-p-bitrodiphenoxyphosphonyliminosulfuryl chlorides (III) are colorless crystals, or liquids which are readily hydrolyzable and distill in a vacuum without dissociation. Protracted boiling of (IIa) or (IIIa) with sodium p-nitrophenylate in a dioxane solution produces a triester (IV). When acid chlorides (II) are interacted with aniline or morpholine, amides (V) and (VI) are synthesized.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

LEVCHENKO, YE. S., and BUDNIK, L. V., et al., Leningrad, Zhurnal Organicheskoy Khimii, Vol 6, No 11, Nov 70, pp 2239-2243

Reaction of acid chloride (IIIa) with morpholine results in compound (VII).

Previously undescribed morpholides and piperidides of N-dichlorophosphonyl- and N-di-p-nitrodiphenoxyphosphonylsulfamic acids were produced by the following reaction.

The authors thank A. V. KIRSANOV for assistance and advice during the work.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 011 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--REACTIONS OF THE OXIDATIVE IMINATION OF DIARYL DISULFIDES -U-

AUTHOR-(02)-LEVCHENKO, YE.S., SELEZNENKO, L.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3), 485-92

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZENE DERIVATIVE, HYDROLYSIS, MOLECULAR STRUCTURE, ORGANIC SULFUR COMPOUND, CHLORINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1669 STEP NO--UR/0366/70/006/003/0485/0492

CIRC ACCESSION NO--AP0112663

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UNCLASSIFIED PROCESSING DATE--30OCT70

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CIRC ACCESSION NO--AP0112663

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTIONS OF 2PHSO SUB2 NCLNA WITH (XC SUB6 H SUB4) SUB2 S SUB2 (I) GAVE (XC SUB6 H SUB4 S) SUB2 (NSO SUB2 PH) SUB2 (II) (X IS H OR P-CL). SIMILARLY, I REACTED WITH 2(ETO) SUB2 C:NCL (III) TO GIVE (XC SUB6 H SUB4 S) SUB2 (NCO SUB2 ET) SUB2 (IV) (X IS P-O SUB2 N OR O-O SUB2 N). THE REACTION OF O,O SUBW NC SUB6 H SUB4 SCL WITH III OR CL SUB2 NCO SUB2 ET ALSO GAVE IV (X EQUALS O,O SUB2 N) (V). PASSING CL THROUGH V GAVE O,O SUB2 NC SUB6 H SUB4 SCL. THE REVERSIBILITY OF THE ABOVE REACTION WAS CONFIRMED BY REACTING P,O SUB2 NC SUB6 H SUB4 SCL WITH CL SUB2 NCO SUB2 ET TO P,O SUB2 NC SUB6 H SUB4 S(:NCO SUB2 ET) CL AND CL. OTHER IV REACTED WITH CL TO GIVE XC SUB6 H SUB4 S(:NCO SUB2 ET)CL. SIMILARLY II REACTED WITH CL TO GIVE XC SUB6 H SUB4 S(:NSO SUB2 PH)CL. THE REACTION OF IV WITH PCL SUB5 GAVE XC SUB6 H SUB4 SCL, CL SUB2 PONCO, AND ETCL. THE HYDROLYSIS OF II OR IV IN ACID SOLNS. GAVE XC SUB6 H SUB4 SO SUB2 SC SUB6 H SUB4 X, AND XC SUB6 H SUB4 SO SUB2 NH SUB2 OR H SUB2 NCO SUB2 ET. ALK. SOLNS. DECOMP. IV TO (XC SUB6 H SUB4 S) SUB2 AND II TO XC SUB6 H SUB4 S(:NSO SUB2, PHNHSO SUB2 PH, (XC SUB6 H SUB4 S) SUB2, AND XC SUB6 H SUB4 SO SUB2 P. THE ABOVE REACTIONS DO NOT PERMIT TO DIFFERENTIATE BETWEEN STRUCTURES (ETO SUB2 CN:S(C SUB6 H SUB4 X)) SUB2, XC SUB6 H SUB4 SS(:NCO SUB2 ET) SUB2 C SUB6 H SUB4 X, OR XC SUB6 H SUB4 S(:NCO SUB2 ET) N (SC SUB6 H SUB4 X)CO SUB2 ET FOR IV OR THE CORRESPONDG STRUCTURES FOR II. FACILITY: INST. ORG. KHIM., KIEV, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

172 008 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--N SUBSTITUTED DERIVATIVES OF IMINOTHIONYL CHLORIDE -U-

AUTHOR-(03)-MARKOVSKIY, L.N., SHOKOL, Z.I., LEVCHENKO, YE.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3), 496-9

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THIOL, CHLORINATED ORGANIC COMPOUND, AMIDE, CONDENSATION REACTION, AMINE DERIVATIVE, BENZENE DERIVATIVE, BROMINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1675 STEP NO--UR/0366/70/006/003/0496/0499

CIRC ACCESSION NO--AP0112669

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 008 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112669

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDENSATION OF AMINES, THEIR HCL SALTS, OR AMIDES WITH SCL SUB2 GAVE 45-80PERCENT RNH SCL SUB2 ER IS P CLC SUB6 H SUB4 CO, P BRC SUB6 H SUB4 CO, ETOCO, 2,NITRO,6,PYRIDYL, 3,5,DICHLORO,2,METHYL,6,PYRIDYL, ME SUB2 NSO SUB2, PIPERIDINO SULFONYL, MORPHOLINOSULFONYL, OF P BR SUB6 H SUB4). THE YIELDS DEPEND ON THE BASICITY AND SOLY. OF THE AMINES OR AMIDES.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--REACTION OF THIOPHENOLS AND SODIUM THIOPHENOLATES WITH BENZENESULFONIC ACID DICHLOROAMIDE -U-

AUTHOR-(02)-LEVCHENKO, YE.S., SELEZNENKO, L.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3), 492-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--THIOL, PHENOL, SULFONIC ACID, AMIDE, CHLORINATED ORGANIC COMPOUND, ORGANOSODIUM COMPOUND, CHLORINATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1671 STEP NO--UR/0366/70/006/003/0492/0496

CIRC ACCESSION NO--AP0112665

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112665

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDN. OF 2 MOLES PHSH TO 1 MOLE PHSO SUB2 NCL SUB2 (I) GAVE PHSCL AND PHSO SUB2 NH SUB2. WHEN I PHSH MOLAR RATIO WAS 2:3, PHSCL REACTED FURTHER GIVING PHS (:NSO SUB2 PH) CL (II). THE ADDN. OF 4 MOLES I TO 5 MOLES PHSH OR P,O SUB2 NC SUB6 H SUB4 SH GAVE (PHS) SUB2 OR (P,O SUB2 NC SUB6 H SUB4 S) SUB2 WHICH REACTED FURTHER WITH I GIVING II OR P,O SUB2 NC SUB6 H SUB4 SL:NSO SUB2 PH)CL (III). THE REACTION OF 2,4,(O SUB2 N) SUB2 C SUB6 H SUB3 SH WITH I GAVE ONLY 2,4,(O SUB2 N) SUB2 C SUB6 H SUB3 SCL AND PHSO SUB2 NH SUB2. THE REACTIONS OF PHSNA, P,CLC SUB6 H SUB4 SNA, OR P,O SUB2 NC SUB6 H SUB4 SNA WITH 1 EQUIV. I GAVE RS(:NSO SUB2 PH)CL (R IS PH, P,CLC SUB6 H SUB4, OR P,O SUB2 NC SUB6 H SUB4). THE REACTION OF PHSNA OR P,MEC SUB6 H SUB3 SNA WITH 0.5 EQUIV. I GAVE (PHS) SUB2 (NSO SUB2 PH) SUB2, OR (P,MEC SUB6 H SUB4 S) SUB2 (NSO SUB2 PH) SUB2 AND THE CORRESPONDING DIARYL DISULFIDES. THE REACTION OF P,O SUB2 NC SUB6 H SUB4 SCH SUB2 PH (IV) WITH I GAVE PREDOMINANTLY III (A CYCLIC REACTIONINTERMEDIATE IS PROPOSED). THE CHLORINATION OF IV DECOMPD. IT TO PHCH SUB2 CL AND P,O SUB2 NC SUB6 H SUB3 SCL. FACILITY: INST. ORG. KHIM., KIEV, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

KAZHBEROV, V., KUL'GACHEV, A., LEVCHENKO, YU., Engineers

"Underwater Communication Set"

Moscow, Radio, No 10, 1970, pp 42-45

Abstract: An article for electronic enthusiasts describing an ultrasonic transceiver for communication between skin divers and shore personnel, operating at a frequency of 72 KHz. The output power of the transmitter section without modulation is about 1.5 watts. Sound is transformed into electricity by laryngophones of the LT-5 type, and the percentage modulation is 80 percent with nonlinear distortion of 10 percent or less. The unit is fully transistorized, with a transmit-receive switch, and the radiating device is piezoelectric with an efficiency of about 30 percent. A complete schematic of the circuit with component values is given, together with a textual description of its makeup and operation. Photographs of the device, packed into a tube 70 mm in diameter, 450 mm in length, with a wall thickness of 2 mm, are shown.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

Acc. Nr. AP0036347 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code UR 0087

L

69310m **New method for calculating the age and the time of metamorphism of minerals and rocks without introducing corrections for the common lead.** Levchenkov, O. A.; Shukolyukov, Yu. A. (Inst. Geol. Geochronol. Precambrian, Leningrad, USSR). *Geokhimiya* 1970, (1), 88–95 (Russ). Different states of U–Pb system of minerals were studied in relation to rock age calcn. The new method of age calcn. (by using a group of minerals or rock samples) is offered for the case of an open U–Pb system without introducing corrections for the common Pb. The method is based on the plotting of U–Pb isochrons. Three examples on age calcns. are given. BLJR

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR UDC 621.791.539.217.1.669.715.767

ALOV, A. A., FILATOV, Yu. A., LEVCHENKOVA, L. A.

"Porosity of Welded Joints in Aluminum Alloys"

Kiev, Avtomaticheskaya Svarka, No 1, Jan 73, pp 70-71.

Abstract: Transmission x-ray studies of joints in aluminum-magnesium alloys made by argon-arc welding have shown pores along the edges of the seams in certain cases. Studies have established that the porosity results from the following processes: 1) during welding, the liquid metal partially flows onto the unmelted surfaces of the edges, covered with a hydrated oxide film. The film is dehydrated with liberation of hydrogen and formation of pores, generally spherical in shape. 2) welding of clad items (sheets and plates) with incomplete removal of the cladding layer results in the development of porosity in the near-seam zone due to unsatisfactory attachment of the clad layer to the base metal. 3) pores are observed along side the seam in high temperature areas in the form of trains along the fibers of the welded goods. This defect results from the presence of discontinuities -- microstratifications and increased concentration of hydrogen in the goods being welded -- as well as strong overheating of the metal, reducing its strength and facilitating the diffusion of hydrogen.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 669.716:621.791.011

USSR

ALOV, A. A., FILATOV, Yu. A., and LEVCHENKOVA, L. A.

"The Effect of the Production Technology of Deformed Semifinished Products of the AMg6 Alloy on Their Weldability"

Metallovedeniye Splavov Legkikh Metallov--Sbornik, Moscow, "Nauka", 1970, pp 37-42, resume

Translation: The effect of microlaminations and hydrogen in deformed semi-finished products of AMg6 alloys on their weldability was investigated. A method for checking the sensitivity of semifinished products to the formation of pores in near-seam zones is recommended. Seven figures, ten bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 034 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--STATIONARY STATE OF ELECTRONS IN A NON EQUILIBRIUM RADIATION FIELD -U-

AUTHOR-(02)-ZELDOVICH, YA.V., LEVICH, E.V.

COUNTRY OF INFO--USSR

SOURCE--JETP LETTERS (USA), VOL. 11, NO. 1, P. 57-60 (JAN. 1970)

DATE PUBLISHED----JAN70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--FREE ELECTRON, ELECTRON DENSITY, EXCITED ELECTRON STATE, COMPTON EFFECT, ELECTROMAGNETIC WAVE SCATTERING, BREMSSTRAHLUNG, COULOMB FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1791 STEP NO--US/0000/70/011/001/0057/0060

CIRC ACCESSION NO--AP0133696

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UNCLASSIFIED PROCESSING DATE--13NOV70

2/2 034

CIRC ACCESSION NO--AP0133696

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STATIONARY STATE OF A SYSTEM OF FREE NONRELATIVISTIC ELECTRONS SITUATED IN A NON EQUILIBRIUM RADIATION FIELD IS DETERMINED. IT IS ASSUMED THAT THE ELECTRONS SCATTER THE RADIATION BY THE COMPTON MECHANISM. THE ROLE OF BREMSSTRAHLUNG PROCESSES IN THE FIELD OF THE NUCLEI WILL BE CONSIDERED SEPARATELY.

FACILITY: USSR ACAD. SCIS.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 053 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--WAVE THEORY OF CROSS SECTIONS OF GAS PHASE SUBSTITUTION REACTIONS. I. DERIVATION OF A FORMULA FOR THE CROSS SECTIONS -U-

AUTHOR-(03)-LEVICH, V.G., BRODSKIY, A.M., TOLMACHEV, V.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(2), 101-7

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DIFFERENTIAL CROSS SECTION, QUANTUM MECHANICS, GAS KINETICS, WAVE FUNCTION, REACTION KINETICS, PERTURBATION METHOD, HAMILTONIAN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/1419 STEP NO--UR/0458/70/004/002/0101/0107

CIRC ACCESSION NO--AP0118408
UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UNCLASSIFIED PROCESSING DATE--13NOV70

2/2 053

CIRC ACCESSION NO--AP0116408

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A NEW QUANTUM MECH. METHOD WAS DEVELOPED FOR THE CALCN. OF DIFFERENTIAL CROSS SECTIONS OF GAS PHASE SUBSTITUTION REACTIONS. THE REACTION WAS CONSIDERED AS A GENERAL SCATTERING PROCESS WITH A REDISTRIBUTION OF REACTING PARTICLES. THE DEPENDENCE OF THE CROSS SECTIONS ON ENERGIES AND ANGLES IS DETD. PRIMARILY BY THE OVERLAP INTEGRAL OF WAVE FUNCTIONS OF INITIAL AND FINAL STATES OF HEAVY PARTICLES. BY USING THE METHOD OF PERTURBED WAVES AND WITH A SPECIAL FORM OF THE HAMILTONIAN, EXPLICIT EXPRESSIONS FOR THE CROSS SECTIONS WERE OBTAINED.

FACILITY: INST. ELEKTROKHIM., MOSCOW, USSR.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--SYNTHESIS AND X RAY DIFFRACTION CHARACTERISTICS OF FLUOROZIRCONATES OF DIVALENT METALS -U-

AUTHOR-(04)-CAVIDOVICH, R.L., LEVCHISHINA, I.F., KAYDALOVA, T.A., BUSLAEV, YU.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 493-7.

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--X RAY DIFFRACTION ANALYSIS, COMPLEX COMPOUND, FLUORIDE, ZIRCONATE, CADMIUM COMPOUND, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1886 STEP NO--UR/0363/70/006/003/0493/0497

CIRC ACCESSION NO--AP0115705

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115705

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDITIONS WERE INVESTIGATED FOR SYNTHESIZING INDIVIDUAL COMPLEX ZR FLUORIDES WITH BIVALENT METALS AND THE X RAY DIFFRACTION CHARACTERISTICS FOR THE SALTS PREPD. ARE PRESENTED. THE STUDY OF THE INTERACTION BETWEEN THE FLUORIDES OF THE BIVALENT TRANSITION METALS AND THE ZRO SUB2 SOLN. IN HF SHOWED THAT SALTS OF ZRF SUB6 PRIME2 NEGATIVE FORM AT THE MOLAR RATIO EQUAL TO 1:1. THE ONLY COMPD. WHICH IT WAS NOT POSSIBLE TO SYNTHESIZE WAS CO SUB2 ZRF SUB8.6H SUB2 O. ALL SYNTHESIZED HEXAFLUOROZIRCONATES ARE SOL. IN WATER. THE PRESENCE OF A LARGE EXCESS OF THE HF PREVENTS THE FORMATION OF THE OCTAFLUORO SALT. X RAY DIFFRACTION STUDIES SHOW THAT A LARGE ISOSTRUCTURAL SERIES OF THE COMPLEXES IS FORMED. THE UNIT CELL PARAMETERS OF COMPLEX FLUORIDES OF THE COMPN. MZRF SUB6.6H SUB2 O WERE DETD.; THE LATTER ARE ISOSTRUCTURAL WITH FESIF SUB6 TYPES 6H SUB2 O. ALSO, THE SYNTHESIZED OCTAFLUOROZIRCONATES OF THE BIVALENT METALS ARE INDIVIDUAL CHEM. COMPDS. THE X RAY DIFFRACTION PATTERNS FOR M SUB2 ZRF SUB8.12H SUB2 O DIFFER FROM THOSE FOR THE HEXAFLUOROZIRCONATES AND FOR THE CORRESPONDING FLUORIDES OF THE BIVALENT METALS. FACILITY: OTD. KHIM. DAL'NEVOST. FILIALA IM. KOMAROVA, VLADIVOSTOK, USSR.

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USSR UDC 543.422.4+541.49+546.831/832

SERGIYENKO, V. I., DAVIDOVICH, R. L., LEVCHISHINA, T. F., SKLYADNEV, Yu. N. (Chemistry Department, Far Eastern Branch, Siberian Department Acad. Sci. USSR)

"Infrared Absorption Spectra of Zirconium and Hafnium Hexafluorocomplexes"

Moscow, Izvesiya Akademiyi Nauk SSSR, Seriya Khimicheskaya, No 5, May 70, pp 1021-1025

Abstract: In the present work are presented the results of the study on the infrared-spectral absorption of hexafluorozirconates and hexafluorohafnates of the composition: $M^{I}_2EF_6$ (M^{I} = Li, K, Rb, Cs), $M^{II}E_2F_6 \cdot 6H_2O$ (M^{II} + Ni, Co, Fe, $MnEF_6 \cdot 5H_2O$ and $CuEF_6 \cdot 4H_2O$ in which M^{I} represent a monovalent - and M^{II} divalent cations and $(EF_6)^{2-}$ represent the octahedral ions in the crystal molecules (E + Zr, Hf). The spectra of all hexafluorocomplexes of zirconium and hafnium with divalent cations showed strong absorption in the regions 400-800, 1600-1700, and 2900-3500 cm^{-1}. In the region 470-495 cm^{-1} there is a strong absorption which agrees with the phase of the monovalent complexes. From the analysis of the infrared spectra it becomes evident that the groups $(ZrF_6)^{2-}$ and $(HfF_6)^{2-}$ are present in all specimens studied.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

LAGUTIN, V. I., LEVCHUK, D. G., SHMANENKOV, V. M., Moscow

"Experimental Study of Hypersonic Flow Around an Oscillating Body With a Flare"

Moscow, Mekhanika Zhidosti i Gaza, No 5, Sep-Oct 70, pp 189-191

Abstract: Results are presented from an experimental study of movement of a hypersonic flow ($M = 6.8$, $R = 0.4 \cdot 10^6 - 4.95 \cdot 10^6$) around a freely oscillating model consisting of a hemisphere connected to a cylinder connected to a cone (flare). It is demonstrated that the nature of oscillations of the model depends essentially on the R and M numbers and the aperture angle of the conical stabilizer. Factors are determined which influence the loss of dynamic stability of the models with low oscillating amplitudes. Studies of the aerodynamic characteristics of bodies with flares (conical stabilizers) performed in the past have indicated certain specifics in the behavior of these characteristics at various M and R numbers. In particular, it has been noted that with increasing M number the dynamic stability of these

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

LAGUTIN, V. I., et al, Mekhanika Zhidkosti i Gaza, No 5, Sep-Oct 70, pp 189-191

bodies decreases. It has also been noted that an increase in the R number at small oscillation amplitudes leads to an increase in stability and has an opposite influence at larger amplitudes. The particular role of the entropy effect in hypersonic unstable aerodynamics has been emphasized. This article presents an attempt at more careful investigation of the flow picture around bodies with flares moving through hypersonic flows.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 533.275

USSR

LEVCHUK, E. A., CHUDNOVSKIY, A. F., and SAMUYLOVA, S. N.

"Low-Inertial Quartz Crystal High-Humidity Sensor Suitable for Agrometeorological Telemetric Systems"

Sb. tr. po agron. fiz. (Collected Works on Agronomic Physics), No 28, 1970, pp 75-76 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 2, Feb 71, Abstract No 2.32.1426)

Translation: This paper is a survey of the latest works on the inertia of quartz crystal adsorption sensors and their calibration charts. It is demonstrated that the linearity of the calibration characteristics of the sensors, their operating reliability and manufacturing simplicity can be increased by using piezoelectric crystal plates, well-known in optics and used to brighten silica film lenses, as the moisture-sensitive coating. There is 1 illustration and a 2-entry bibliography.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR UDC 533.225.088

LEVCHUK, E. A., CHUDNOVSKIY, A. F.

"Calculating the Temperature Error of Quartz Crystal Adsorption Humidity Sensors in a Wide Range of Negative Temperatures"

Sb. tr. po agron. fiz. (Collected Works on Agronomic Physics), No 28, 1970, pp 77-79 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 2, Feb 71, Abstract No 2.32.1425)

Translation: The expression for the relative error in determining humidity as a function of the magnitude of the temperature variation is derived on the basis of the analytical dependence of the readings of quartz crystal sensors on the relative humidity. The operating temperature ranges of the sensors within the limits of which the temperature error does not exceed the given one are calculated. There is 1 illustration, 1 table and a 2-entry bibliography.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 033 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--DETERMINATION OF KINETIC STRESS FUNCTIONS IN THE THEORY OF VISCOUS AND INVISCID FLUIDS -U-
AUTHOR--LEVCHUK, O.F.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK UKRAINS'KOI RSR, DOPOVIDI, SERIIA A FIZIKO TEKHNICHNI I MATEMATICHNI NAUKI, VOL. 32, MAR. 1970, P. 254-258
DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--BOUNDARY VALUE PROBLEM, MOTION MECHANICS, VISCOUS FLUID, FLUID KINETICS, STRESS ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/1032 STEP NO--UR/0441/70/032/000/0254/0258

CIRC ACCESSION NO--AT0119899
UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 033 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0119899

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEVELOPMENT OF A PROCEDURE FOR SOLVING THE BOUNDARY VALUE PROBLEMS OF THE MOTION OF VISCOUS AND INVISCID FLUIDS WITH THE AID OF KINETIC STRESS FUNCTIONS INTRODUCED BY KILCHEVSKII ET AL. (1953-1967). THE PROCEDURE IS APPLIED TO THE ARBITRARY MOTION OF INVISCID AND VISCOUS INCOMPRESSIBLE FLUIDS AND TO THE STOKES PARADOX. FACILITY: KIIVS'KII POLITEKHNICHNII INSTITUT, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 616.85:358.4

USSR

LEVCHUK, S. S., Lt Col Med Serv

"Changes in the Neurological Status of the Flight Condition of Military-Civil Aviation"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 10, 1972, p 67

Abstract: This article reports an experimental study of fliers ranging from 20-30 years of age, before and after flights over average distances in military and civil aircraft. It was established that the changes occurring in the neurological conditions of most of the subjects disappeared after rests of 7 to 8 hours. Only a few required 10-12 hours to return to normal.

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LEVCHUK, S. S

Aud.

J-9979

82

(pp 59-60)

By Lieutenant Colonel Medical Service L. ... Ortyagev,
Candidate of Medical Sciences,
Major Medical Service ... Sergeyev,
Lieutenant Colonel Medical Service A. S. Ivanov,
Lieutenant Colonel Medical Service S. ... Levchuk,
and Major Medical Service A. I. ...

The modern technical equipment of the ... (bayonna-transportnaya aviatsiya, military transport aviation) has considerably broadened its tactical possibilities. Naturally, this has changed the conditions of its professional activities and led to stricter requirements concerning the working capability of the personnel of the flight crews. Of late, works were published dedicated to the medical study of the working conditions and way of life of VTA flight personnel. Thus, as a result of clinical-psychological and hygienic studies of VTA flight activities, a number of authors have provided medical descriptions and described the specific characteristics of long-distance flights (... I. Levitsh, Ye. ... Bondarev, P. A. Vedernov, F. ... Gorishchuk, V. ... (Ochinnikov, V. ... Narsvetasov, ... Tokmakyants, 1968, and others).

The object of our study was the influence of ... on the body of the flight personnel. In this effect, we studied 42 members of flight crews who displayed no deviations in their state of health. They were in the 20-39 years age group with ... to 10 years of flight experience. The studies were made before the flights and 30-40 minutes after landing in the spring-summer period. The flights took place in simple weather conditions at a ... meters altitude. ... and lasted ... the influence of the flights on the state of the body was evaluated through studies of the nervous and cardiovascular systems and through laboratory data.

... with a view to estimating the dynamics of nervous processes (capability to concentrate and switch the attention), we used the intermittent flashing of numbers test. ... determined a steady increase in the number of errors after flights, ... with the starting data (1 - ...; 2 - initial ...; 3 - ... marked by M); the overall time was increased insignificantly (by three seconds). The attention span was determined with the help of the correctional method involving the use of Landolt rings. The number of

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USSR UDC: 621.378.325

ZVEREV, G. M., LEVCHUK, Ye. A., PASHKOV, V. A., PORYADIN, Yu. D.

"Laser Destruction of the Surface of Lithium Niobate and Lithium Tantalate Single Crystals"

Moscow, Kvantovaya Elektronika, Sbornik Statey, No 2(8), 1972, pp 94-96

Abstract: The research was done in the mode of free emission ($\lambda = 1.06$ μm) and in the monopulse emission mode on $\lambda = 1.06$ and 0.53 μm from a single-mode neodymium glass laser. Threshold of destruction is the same on both wavelengths ~ 120 MW/cm^2 for lithium niobate, and 240 MW/cm^2 for lithium tantalate. It is found that the destruction threshold in the free emission mode increases with a reduction in the diameter of the light spot, and remains constant in the monopulse mode. Mechanisms of surface destruction are discussed. It is suggested that the reduction process $Nb^{5+} \rightarrow Nb^{4+}$ is responsible for destruction of the surface of lithium niobate. Three illustrations, bibliography of five titles.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

UDC 621.375.82

ZVEREV, G. M., LEVCHUK, Ye. A., PASHKOV, V. A., PORYADIN, Yu. D.

"Breakdown of the Surface of Lithium Niobate and Lithium Tantalate Single Crystals Under Laser Radiation"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 2, Moscow, "Sov. radio", 1972, pp 94-96 (from RZh-Fizika, No 10, Oct 72, Abstract No 10D1011)

Translation: The radiation of a single-mode neodymium glass laser was investigated in a free oscillation mode (λ = 1.06 μ) and a single-pulse mode (λ = = 1.06 and 0.53 μ). The breakdown threshold for the 1.06 and 0.53 μ waves coincide and are 120 Mw/cm^2 for $LiNbO_3$ and 240 Mw/cm^2 for $LiTaO_3$. Surface breakdown occurs after several bursts. It was established that in a free oscillation mode the breakdown threshold rises with a decrease in the diameter of the light spot and remains constant in a single-pulse mode. Surface breakdown mechanisms are discussed. It is hypothesized that the reduction process $Nb^{5+} \rightarrow Nb^{4+}$ is responsible for the breakdown of the $LiNbO_3$ surface. Authors abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 040 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--THERMAL SELF FOCUSSING OF LASER RADIATION IN SUBSTANCES WITH NEGATIVE ON,DT -U-

AUTHOR-(04)-ZVEREV, G.M., LEVCHUK, YE.A., MALOUTIS, E.K., PASHKOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--PIS'MA, ZH. EKSP. TEOR, FIZ, 1970, 11(3), 117-81

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER PULSE, LASER SELF FOCUSING EFFECT, THERMAL EFFECT, DIELECTRIC MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0150 STEP NO--UR/0386/70/011/003/0177/0181

CIRC ACCESSION NO--AP0103829

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UNCLASSIFIED PROCESSING DATE--23OCT70

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CIRC ACCESSION NO--AP0103829

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT WAS SHOWN THEORETICALLY THAT IN SOLID BODIES WITH DN/DT SMALLER THAN 0 THERMAL SELF FOCUSSING IS POSSIBLE FOR LASER PULSES OF ANY DURATION. THIS WAS CONFIRMED EXPTL. WITH DIELECS., 20 TIMES 20 CM. HEATED WITH AN ND LASER, BEAM DIAM 1.5 MM.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 047 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THERMAL SELF FOCUSSING OF RADIATION FROM A FREE RUNNING LASER IN KDP AND ALP CRYSTALS -U-

AUTHOR-(03)-ZVERYEV, G.M., LEVCHUK, YE.A., MALDUTIS, E.K.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 5, PP 1487-1490

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER SELF FOCUSING EFFECT, LASER BEAM, ANISOTROPY, Q SWITCHED PULSE LASER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0018 STEP NO--UR/0056/70/058/005/1487/1490

CIRC ACCESSION NO--AP0127668

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 047 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0127668

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SELF FOCUSSING FILAMENTS PRODUCED IN KDP AND ADP CRYSTALS BY THE RADIATION FROM A FREE RUNNING LASER ARE REPORTED. SELF FOCUSSING IS THE RESULT OF HEATING OF THE MATERIAL BY THE LASER BEAM. FILAMENTARY DEFECTS ARE PRODUCED ONLY UNDER THE ACTION OF E POLARIZED LIGHT ON THE SAMPLE. SELF FOCUSSING ANISOTROPY IS EVIDENTLY DUE TO ANISOTROPY OF DN-DT. THE POSSIBILITY OF OBSERVING THERMAL SELF FOCUSSING IN KDP AND ADP MATERIALS WITH A TABULAR VALUE DN-DT SMALLER THAN 0 IS ASCRIBED TO NONUNIFORM PULSED HEATING. IN CONTRAST WITH FREE RUNNING OPERATION CONDITIONS, SELF FOCUSSING OF A Q SWITCHED LASER RADIATION IS OF A STRICTIONAL NATURE.

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USSR UDC 546.185

SHOKOL, V. A., GOLIK, G. A., LEVCHUK, Yu. N., YEGOROV, Yu. P., and DERKACH, G. I. (deceased), Institute of Organic Chemistry, Academy of Sciences, UkrainianSSR

"Acidolysis of Reaction Products of Amidoesters of Alkylphosphonic Acids With Phosphorus Pentachloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 4, Apr 73, pp 747-750

Abstract: Alkyldichlorophosphazo- and alkylaroxychlorophosphazodichlorophosphonyls react with anhydrous formic acid yielding alkyldichlorophosphazo- and alkylaroxychlorophosphazochloroxyphosphonyls. Acidolysis of trichlorophosphazotrichloromethylchlorophosphonyl yields the chloroanhydride of N-dichlorophosphonylamidotrichloromethylphosphonic acid. The structures of the products were proposed on the basis of NMR ^{31}P and IR spectroscopic data. All of these products are dense liquids soluble in benzene, dioxane, and acetone, insoluble in petroleum ether.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR UDC 547.241

SHOKOL, V. A., GOLIK, G. A., LEVCHUK, Yu. N., YEGOROV, Yu. P., and DERKACH, G. I. (Deceased), Institute of Organic Chemistry, Academy of Sciences, UkrSSR

"Structure of the Reaction Products of Amidoesters of Alkylphosphonic Acids With Phosphorus Pentachloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 43(105), No 2, Feb 73, pp 267-274

Abstract: Reactions of phosphorus pentachloride with the amides of ethyl and aryl esters of methyl-, chloromethyl-, dichloromethyl-, and trichloromethyl phosphoric acid were studied in an attempt to determine under what conditions isometic products could be obtained. Analyzing the products by the IR, NMR ^{31}P, and NMR ^{1}H spectroscopical methods, it was shown that depending on the alkyl radical attached to the phosphorus atom, the reaction products could either be trichlorophosphazoalkylchloro- and alkylaroxyphosphonyls, or their isomers -- alkyldichloro- and alkylaroxychlorophosphazodichlorophosphonyls or their mixture.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

AA0044745 LEVDANSKIY N.A.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 1/70

241138 A MECHANICAL-PNEUMATIC CONVERTER, forming a means of providing pneumatic control pulses according to the position of a moving index plate, is proposed for use in operating pneumatic clutches, clamps, cylinders and the like. The diagram shows the moving plate 12, part of a mechanism moving up or down, interrupting an air jet from nozzle 5 to receiving orifice 4, positioned in the armature 3 of an electromagnet device 1,2. The windings are fed with AC at a frequency, for pneumatic follower work, of the order 100-800 Hz. The armature is tuned by springs 6 and screw 7 to a suitable amplitude. In the pneumatic relay 11 the feed is directed to channel a if the plate misses the jet reaching 4, and Py is able to operate the relay. If the plate stops the jet the relay goes over to b, P_y being 0. In an intermediate position the vibrating armature causes similar pulsation in the relay, proportionately to a and b according as the plate edge is below or above the centre line of the swinging jet.

13.9.66 as 1102695/26-24.F.F.ERYKALOV & N.A. LEVDANSKII. TYRE INDUSTRY R & D INST. (26.8.69) Bul 13/1.4.69. Class 42r. Int.Cl.G 05b.

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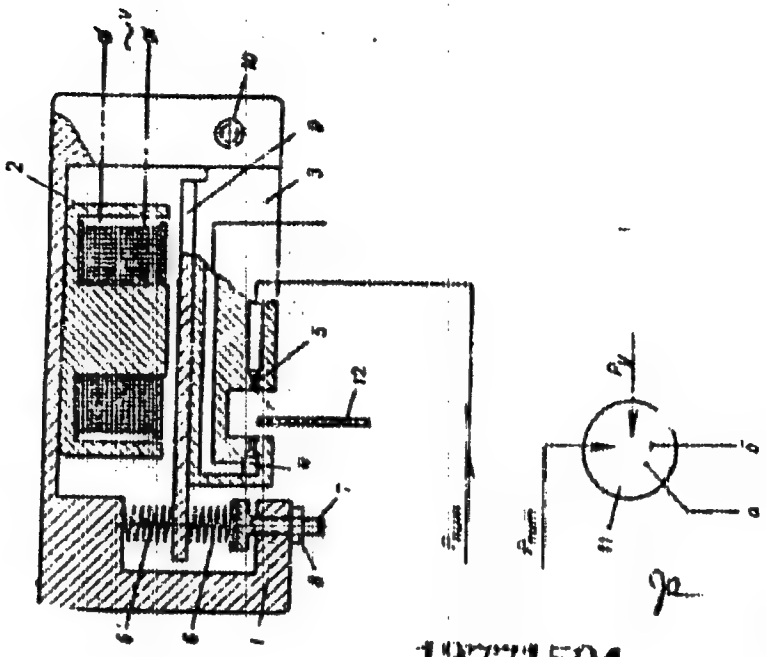

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19771504

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

AA0044745

AUTHORS: Verykalov, F. F.; Levdanskiy, N. A.

Nauchno - Issledovatel'skiy Konstruktorsko - Tekhnologicheskiy Institut Shinnoy Promyshlennosti

19771505

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USSR

[illegible], V. A., [illegible], V. P., [illegible]

"Effect of an External Field on the Temperature Hysteresis of the Magnetic Structure of Chromium"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 6, June 1972, pp [illegible]

Abstract: [illegible] a change was observed in the sign of temperature hysteresis of the magnetic structure of chromium during transition of a single crystal [illegible] density waves brought about by cooling the specimen through the Néel point in a strong magnetic field. In this paper a neutron diffraction study is made at $\lambda = 1.25$ A to determine the behavior of temperature hysteresis of ordinary chromium in the presence of a magnetic field, using the same brittle single crystal as in the previous work. The results confirm the conclusions of the previous research. It was found that low-temperature magnetic treatment is more effective than cooling through the Néel point in isolating the predominant modulation.

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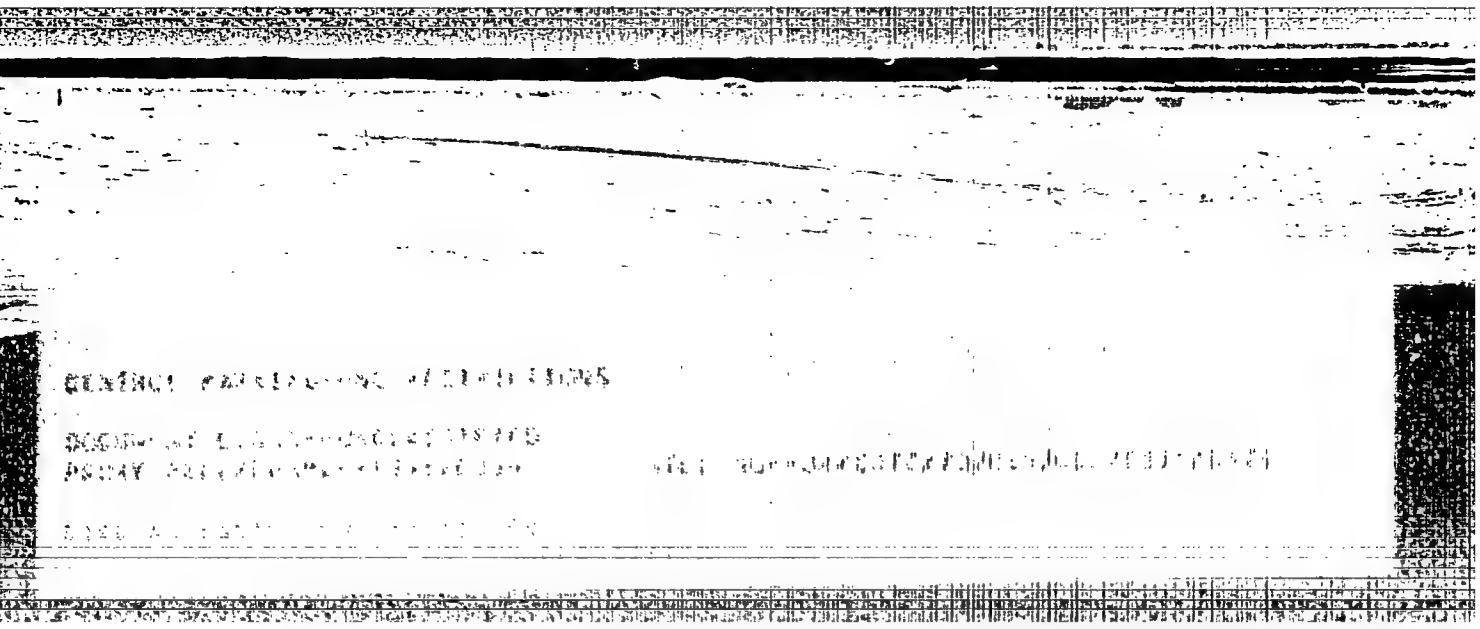

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USSR UDC 621.375.82

ZVEREV, G. M., LEVCHUK, Yu. A., PASHKOV, V. A., PORYADIN, Yu. D.

"Breakdown of the Surface of Lithium Niobate and Lithium Tantalate Single Crystals Under Laser Radiation"

V sb. Kvant. elektronika (Quantum Electronics -- Collection of Works), No. 2, Moscow, "Sov. radio", 1972, pp 94-96 (from RZh-Fizika, No 10, Oct 72, Abstract No 10D1011)

Translation: The radiation of a single-mode neodymium glass laser was investigated in a free oscillation mode (λ = 1.06 μ) and a single-pulse mode (λ = = 1.06 and 0.53 μ). The breakdown threshold for the 1.06 and 0.53 μ waves coincide and are 120 Mw/cm^2 for $LiNbO_3$ and 240 Mw/cm^2 for $LiTaO_3$. Surface breakdown occurs after several bursts. It was established that in a free oscillation mode the breakdown threshold rises with a decrease in the diameter of the light spot and remains constant in a single-pulse mode. Surface breakdown mechanisms are discussed. It is hypothesized that the reduction process $Nb^{5+} \rightarrow Nb^{4+}$ is responsible for the breakdown of the $LiNbO_3$ surface. Authors abstract.

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1/2 040 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--THERMAL SELF FOCUSSING OF LASER RADIATION IN SUBSTANCES WITH NEGATIVE DN,DT -U-

AUTHOR-(04)-ZVEREV, G.M., LEVCHUK, YE.A., MALDUTIS, E.K., PASHKOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--PIS'MA, ZH. EKSP. TEOR, FIZ, 1970, 11(3), 177-81

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER PULSE, LASER SELF FOCUSING EFFECT, THERMAL EFFECT, DIELECTRIC MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/0150 STEP NO--UR/0386/70/011/003/0177/0181

CIRC ACCESSION NO--AP0103829
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UNCLASSIFIED PROCESSING DATE--23OCT70

2/2 040

CIRC ACCESSION NO--AP0103829

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT WAS SHOWN THEORETICALLY THAT IN SOLID BODIES WITH DN,DT SMALLER THAN 0 THERMAL SELF FOCUSSING IS POSSIBLE FOR LASER PULSES OF ANY DURATION. THIS WAS CONFIRMED EXPTL. WITH DIELECS., 20 TIMES 20 CM, HEATED WITH AN ND LASER, BEAM DIAM 1.5 MM.

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1/2 047 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THERMAL SELF FOCUSSING OF RADIATION FROM A FREE RUNNING LASER IN KDP AND ADP CRYSTALS -U-

AUTHOR-(03)-ZVERYEV, G.M., LEVCHUK, YE.A., MALOUTIS, E.K.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEORETICHESKOY FIZIKI, 1970, VOL 58, NR 5, PP 1487-1490

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER SELF FOCUSING EFFECT, LASER BEAM, ANISOTROPY, Q SWITCHED PULSE LASER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0018 STEP NO--UR/0056/70/058/005/1487/1490

CIRC ACCESSION NO--AP0127668

UNCLASSIFIED

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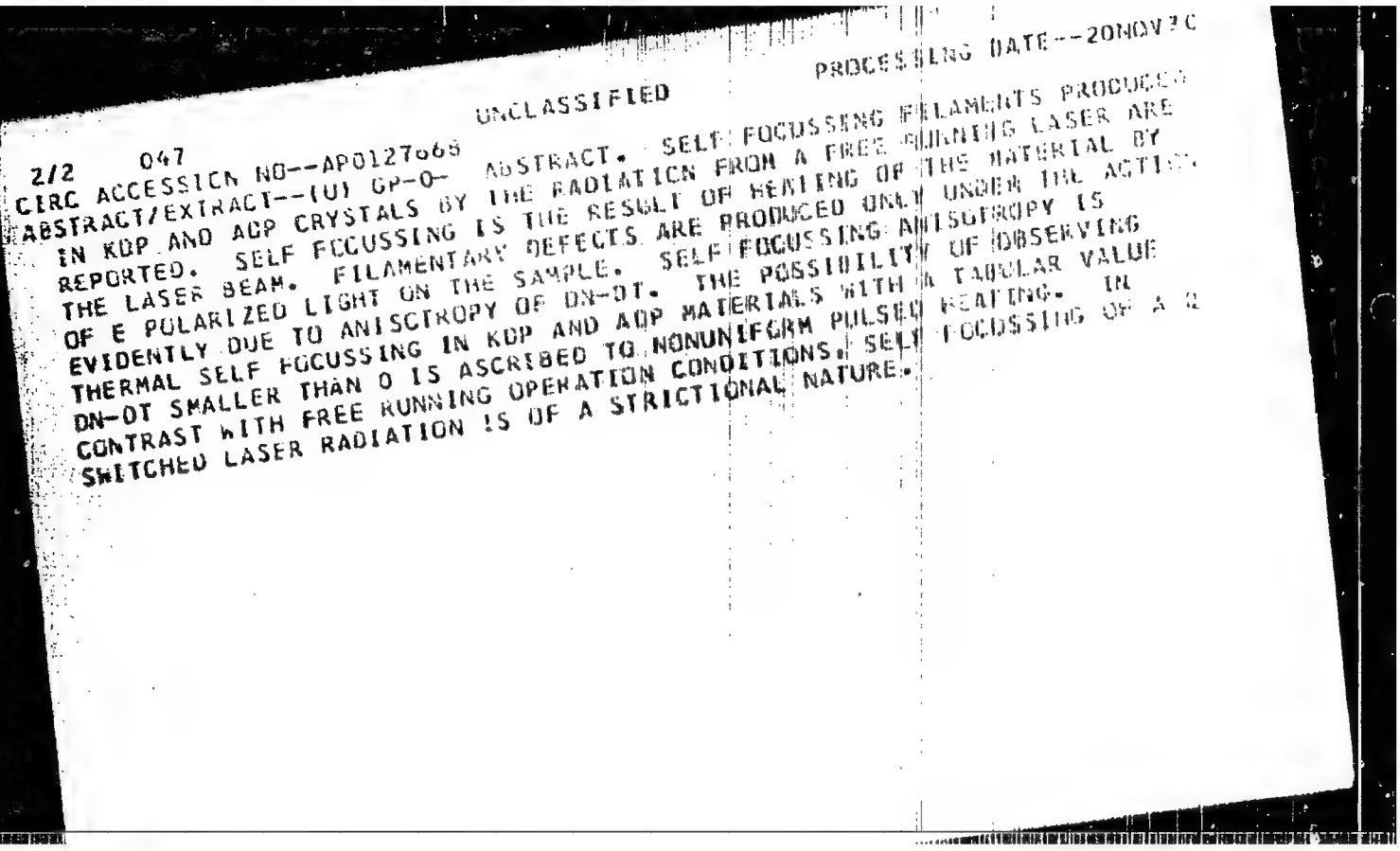

UNCLASSIFIED PROCESSING DATE--20NOV70

2/2 047

CIRC ACCESSION NO--AP0127068

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SELF FOCUSSING FILAMENTS PRODUCED IN KDP AND ADP CRYSTALS BY THE RADIATION FROM A FREE RUNNING LASER ARE REPORTED. SELF FOCUSSING IS THE RESULT OF HEATING OF THE MATERIAL BY THE LASER BEAM. FILAMENTARY DEFECTS ARE PRODUCED ONLY UNDER THE ACTION OF E POLARIZED LIGHT ON THE SAMPLE. SELF FOCUSSING ANISOTROPY IS EVIDENTLY DUE TO ANISOTROPY OF DN-DT. THE POSSIBILITY OF OBSERVING THERMAL SELF FOCUSSING IN KDP AND ADP MATERIALS WITH A TABULAR VALUE DN-DT SMALLER THAN 0 IS ASCRIBED TO NONUNIFORM PULSED HEATING. IN CONTRAST WITH FREE RUNNING OPERATION CONDITIONS, SELF FOCUSSING OF A Q SWITCHED LASER RADIATION IS OF A STRICTIONAL NATURE.

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UDC 546.185

USSR

SHOKOL, V. A., GOLIK, G. A., LEVCHUK, Yu. N., YEGOROV, Yu. P., and DERKACH, G. I. (deceased), Institute of Organic Chemistry, Academy of Sciences, UkrainianSSR

"Acidolysis of Reaction Products of Amidoesters of Alkylphosphonic Acids With Phosphorus Pentachloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 4, Apr 73, pp 747-750

Abstract: Alkyldichlorophosphazo- and alkylaroxychlorophosphazodichlorophosphonyls react with anhydrous formic acid yielding alkyldichlorophosphazo- and alkylaroxychlorophosphazochloroxyphosphonyls. Acidolysis of trichlorophosphazotrichloromethylchlorophosphonyl yields the chloroanhydride of N-dichlorophosphonylamidotrichloromethylphosphonic acid. The structures of the products were proposed on the basis of NMR^{31}P and IR spectroscopic data. All of these products are dense liquids soluble in benzene, dioxane, and acetone, insoluble in petroleum ether.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 547.241

USSR

SHOKOL, V. A., GOLIK, G. A., LEVCHUK, Yu. N., YEGOROV, Yu. P., and DERKACH, G. I. (Deceased), Institute of Organic Chemistry, Academy of Sciences, UkrSSR

"Structure of the Reaction Products of Amidoesters of Alkylphosphonic Acids With Phosphorus Pentachloride"

Leningrad, Zhurnal Obshchey Khimii, Vol 43(105), No 2, Feb 73, pp 267-274

Abstract: Reactions of phosphorus pentachloride with the amides of ethyl and aryl esters of methyl-, chloromethyl-, dichloromethyl-, and trichloromethyl phosphoric acid were studied in an attempt to determine under what conditions isometic products could be obtained. Analyzing the products by the IR, NMR ^{31}P, and NMR ^{1}H spectroscopical methods, it was shown that depending on the alkyl radical attached to the phosphorus atom, the reaction products could either be trichlorophosphazoalkylchloro- and alkylaroxyphosphonyls, or their isomers -- alkyldichloro- and alkylaroxychlorophosphazodichlorophosphonyls or their mixtures.

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LEVDANSKIY N.A.

AA0044745 UR 0482 1/10

Soviet Inventions Illustrated, Section II Electrical, Derwent,

241138 A MECHANICAL-PNEUMATIC CONVERTER, forming a means of providing pneumatic control pulses according to the position of a moving index plate, is proposed for use in operating pneumatic clutches, clamps, cylinders and the like. The diagram shows the moving plate 12, part of a mechanism moving up or down, interrupting an air jet from nozzle 5 to receiving orifice 4, positioned in the armature 3 of an electromagnet device 1,2. The windings are fed with AC at a frequency, for pneumatic follower work, of the order 100-800 Hz. The armature is tuned by springs 6 and screw 7 to a suitable amplitude. In the pneumatic relay 11 the feed is directed to channel a if the plate misses the jet reaching 4, and Py is able to operate the relay. If the plate stops the jet the relay goes over to b, Py being 0. In an intermediate position the vibrating armature causes similar pulsation in the relay, proportionately to a and b according as the plate edge is below or above the centre line of the swinging jet.

13.9.66 as 1102695/26-24. F.P.ERMKALOV & N.A. LEVDANSKII. TYRE INDUSTRY R & D INST. (26.8.69)

Bul 13/1.4.69. Class 42r. Int.Cl.G 05b.

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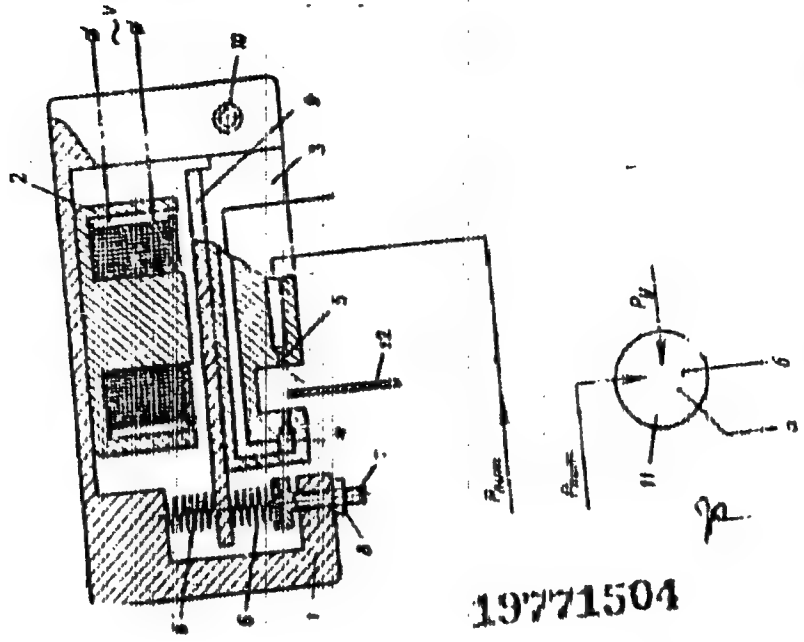

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

AA0044745

AUTHORS: Yerykalov, F. F.; Levdanskiy, N. A.

Nauchno - Issledovatel'skiy Konstruktorsko - Tekhnologicheskiy Institut Shinnoy Promyshlennosti

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

GOLOVKIN, V. S., BYKOV, V. N., LEVDIK, V. A.

"Effect of an External Field on the Temperature Hysteresis of the Magnetic Structure of Chromium"

Leningrad, Fizika Tverdogo Tela, Vol 14, No 6, Jun 72, pp 1783-1784

Abstract: In previous research by these same authors (DAN SSSR, Vol 201, 1971, p 1330) a change was observed in the sign of temperature hysteresis of the magnetic structure of chromium during transition of a single crystal from the "three-Q" state (ordinary chromium) to the "one-Q" state, which is characterized by the presence of domains with only modulation of spin density waves brought about by cooling the specimen through the Néel point in a strong magnetic field. In this paper a neutron diffraction study is made at $\lambda = 1.25$ Å to determine the behavior of temperature hysteresis of ordinary chromium in the presence of a magnetic field, using the same iodide single crystal as in the previous work. The results confirm the conclusions of the previous research. It was found that low-temperature magnetic treatment is more effective than cooling through the Néel point in isolating the predominant modulation.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

1/2 016 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--NEUTRON DIFFRACTION STUDY OF ZIRCONIUM NITRIDE HYDRIDE -U-

AUTHOR-(05)-BYKOV, V.N., GOLOVKIN, V.S., LEVCIK, V.A., KALININ, V.P., MIRON, N.F.

COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(2), 376

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--NEUTRON DIFFRACTION, ZIRCONIUM NITRIDE, HYDRIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/0899 STEP NO--UR/0070/70/015/002/0376/0376

CIRC ACCESSION NO--AP0116409
UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

2/2 018 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0116409

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ZRN SUB0.36 N SUB0.60 WAS STUDIED BY NEUTRON DIFFRACTION TO DET. THE LOCALIZATION OF N AND H ATOMS AND THE EFFECT OF N ON THE DISTRIBUTION OF H ATOMS IN THE HYDRIDE LATTICE. THE CLOSEST AGREEMENT BETWEEN THE EXPTL. AND CALCD. DATA WAS OBTAINED FOR THE P6AR3M1 MODEL. THE N ATOMS ARE LOCATED ON THE OCTAHEDRONS EVERY OTHER LAYER AND H ATOMS ON ALL TETRAHEDRONS, BUT THE NO. OF H ATOMS IN THE LAYERS CONTG. N ATOMS IS 4 TIMES SMALLER THAN IN THE N FREE LAYERS.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC: 621.372.852

USSR

LEVDIKOVA, T. L., DETINKO, V. N.

"Multisection Systems Based on an Evanescent Waveguide"

Kiev, Radioelektronika, Vol 15, No 7, Jul 72, pp 899-905

Abstract: A method is proposed for calculating the characteristics of a multiple-loop system based on an evanescent waveguide of rectangular cross section with identical transverse posts having small end clearances with identical spacing. Resonance frequencies and resonance properties are determined for systems made up of two and three coupled evanescent waveguide resonators.

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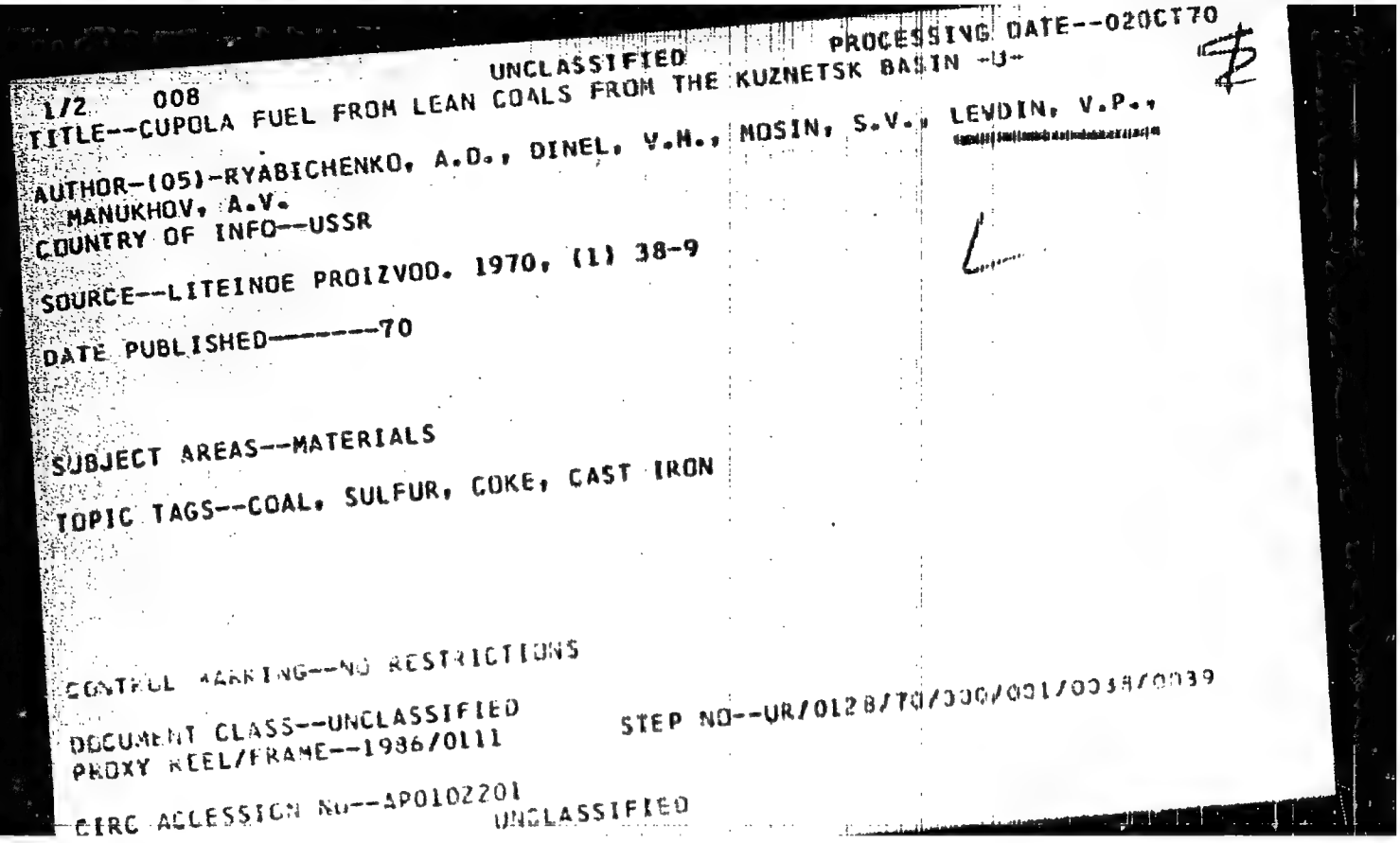


UNCLASSIFIED PROCESSING DATE--020CT70

1/2 008

TITLE--CUPOLA FUEL FROM LEAN COALS FROM THE KUZNETSK BASIN -U-

AUTHOR-(05)-RYABICHENKO, A.D., DINEL, V.N., MOSIN, S.V., LEVDIN, V.P.,
MANUKHOV, A.V.

COUNTRY OF INFO--USSR

SOURCE--LITEINOE PROIZVOD. 1970, (1) 38-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--COAL, SULFUR, COKE, CAST IRON

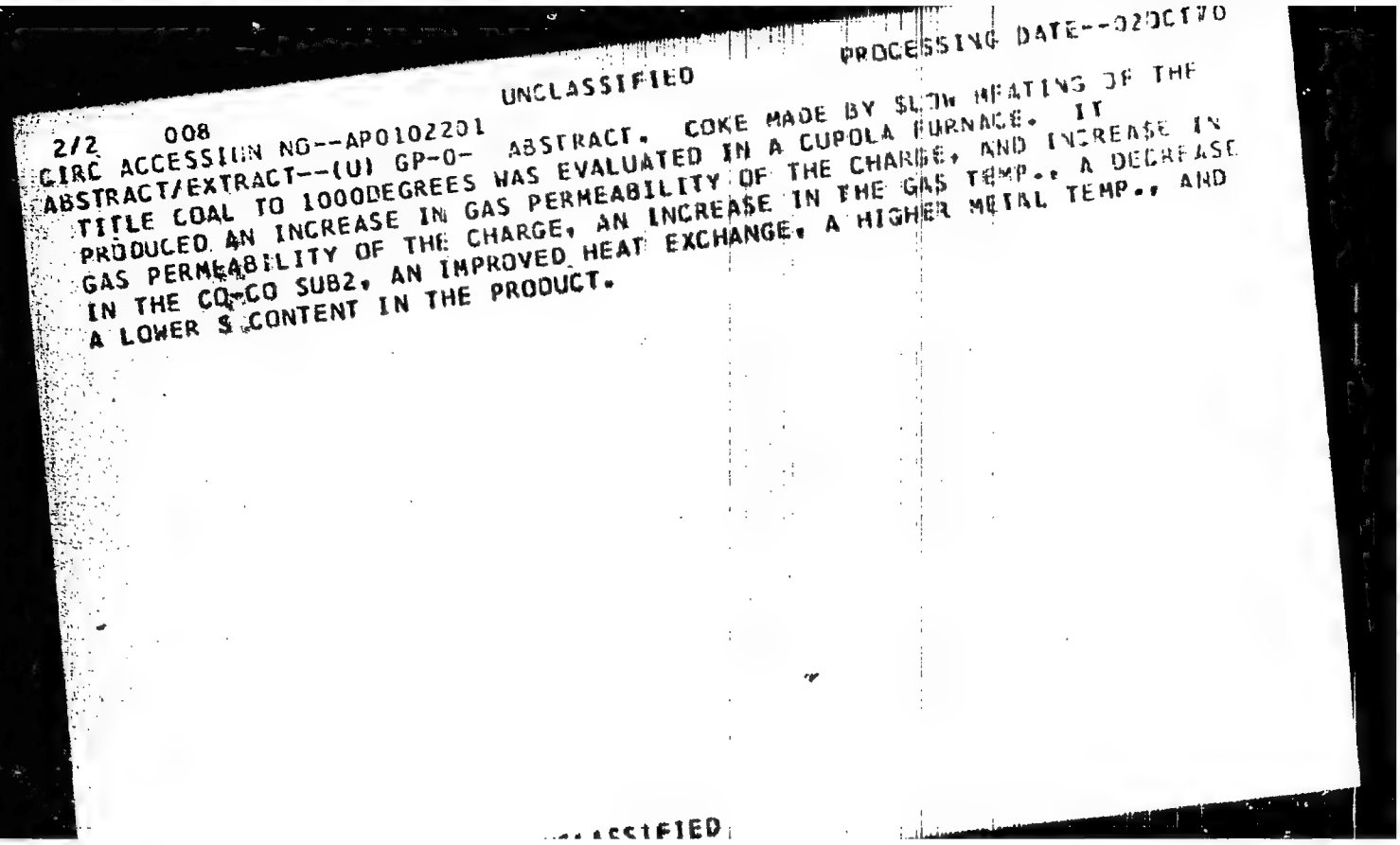
CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0128/70/000/001/0038/0039
PROXY REEL/FRAME--1986/0111

CIRC ACCESSION NO--AP0102201
UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5



UNCLASSIFIED PROCESSING DATE--02OCT70

2/2 008

CIRC ACCESSION NO--AP0102201

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COKE MADE BY SLOW HEATING OF THE TITLE COAL TO 1000DEGREES WAS EVALUATED IN A CUPOLA FURNACE. IT PRODUCED AN INCREASE IN GAS PERMEABILITY OF THE CHARGE, AND INCREASE IN GAS PERMEABILITY OF THE CHARGE, AN INCREASE IN THE GAS TEMP., A DECREASE IN THE CO-CO SUB2, AN IMPROVED HEAT EXCHANGE, A HIGHER METAL TEMP., AND A LOWER S CONTENT IN THE PRODUCT.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR UDC 620.172

KOTOV, P. I., LEVEDEV, V. M., MERKULOV, V. N., Moscow

"Creep of Titanium Alloys Under Variable Loads"

Problemy Prochnosti, No 3, 1972, pp 45-49.

Abstract: The creep of titanium alloys VT-14 and VT-20 is studied in the 300-400°C temperature range with variable loads. It is demonstrated that with a stepped loading mode, the accumulation of creep deformations occurs slower than the calculated rate, while with a smoothly increasing load, the predictions of the theory of hardening are satisfactorily accurate. In the case of alternating loads and rests, the elastic after effect appears rather clearly during rest periods.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 532.507

USSR

VOLCHKOV, E. P., KOZ'MENKO, V. K., LEVEDEV, V. P.

"Influence of Initial Dynamic Sector on Heat Exchange in a Turbulent Boundary Layer with Injection"

Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 6, 1971, pp 126-131.

ABSTRACT: The results are presented of a study of the influence of an initial dynamic sector on heat exchange during injection. The experimental data produced indicate that the starting sector may have a significant influence on heat exchange. The method suggested is based on utilization of the relative laws of heat exchange; the influence of the initial sector is considered using the Stanton number over the impermeable surface. The calculations agree satisfactorily with the experimental data of these and other author's.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC: 621.791.011:669.15-194

USSR

FOMINA, O. P., LEVENBERG, N. Ye., SELEZNEV, A. G., and GERMAN, S. I.; Khar'kov Polytechnical Institute, Kharkov, Turbine Plant

"Mechanical Properties of the Metal in the High-Temperature Region of the Heat-Affected Zone in 15Kh1M1FL Steel Welds"

Kiev, Avtomaticheskaya Svarka, No 11, Nov 70, pp 30-31

Abstract: A study was made of the high-temperature region of the heat-affected zone in 15Kh1M1FL steel (0.19% C, 0.04% Mn, 1.7% Cr, 1.14% Mo, 0.14% V). The effects of various tempering conditions on the structural transformations and properties of the metal of each variant of the imitated weld-affected zone were analyzed. It was found that the ductility of the metal in the high-temperature region of the heat-affected zone markedly depends on the cooling rate after welding. As applied to multipass welding conditions, the required impact toughness may be met by tempering the weld at 740-760°C. The hardness of the high-temperature region of the heat-affected zone in 15Kh1M1FL will not always

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

FOMINA, O. P., et al, Avtomaticheskaya Svarka, No 11, Nov 70, pp 30-31

correlate with the impact toughness. A decrease in the hardness after tempering even to HV 220 for a metal very slowly cooled down from 1300°C will not raise the impact toughness.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 621.438-235.5.018.001.24

USSR

LEVENBERG, V. D., and ROMANOVSKIY, G. F.

"On An Estimate of the Influence of the Height of the Blades of the Flow Section on the Effectiveness of Two-Rim Active Stages"

Sudostr. i Mor. Soorruzh. Resp. Mezhved. Temat. Nauch.-Tekh. Sb. [Shipbuilding and Marine Installations. Republic Interdepartmental Thematic Scientific Technical Collection], No 16, 1971, pp 32-37 (from Referativnyy Zhurnal, Turbostroyeniye, No 49. Single Issue No 2, 1972, Abstract No 2.49.24)

Translation: Results were derived with which one may evaluate the effect of height of the second blade rim on its efficiency and also of the height of blades of the flow section on the effectiveness of the two-rim active stage. It is demonstrated that the efficiency decrease of the two-rim stage by decreasing l/D is more abrupt in comparison with the one-rim stage. The right of η_1 has to be noted for the two-rim stage depending on η_{uol}/η_{uco}, in accordance with the value of η_{uol}/η_{uco}, where η_{uco} is the peripheral efficiency of the first row stage. Three illustr., two biblio. refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 621.438:533.6.011.5

USSR

LEVINBERG, V. D., and ROMANOVSKIY, G. F.

"Effect of the Angle of Setting of Stator Blades on the Ventilation Force of a Radial-Axial Turbine Stage"

Sudostr. i Mor. Soorush. Resp. Mezhved. Temat. Nauch.-Tekh. Sb. [Shipbuilding and Marine Installations. Republic Interdepartmental Thematic Scientific Technical Collection], No 10, 1971, pp 26—29 (from Referativnyy Zhurnal, Turbostroyeniye, No 12, Single Issue No 2, 1972, Abstract No 2.42.60)

Translation : Experimental investigation results are presented of the effect of the blade setting angle of the guiding device on the ventilation force in the radial-axial stage. It is demonstrated that the ventilation force $a_b^{\varepsilon=0}$ depends essentially on the blade setting angle. At setting angles of $\alpha_y = 20$ and 150° for forward and reverse rotations, the dimension $a_b^{\varepsilon=0}$ reaches

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USSR

LEVENBERG, V. D. and ROMANOVSKIY, G. F., Sudostr. i Mor. Sbornik. Resp. Mezhved. Temat. Nauch.-Tekh. Sb. No 16, 1971, pp 26-29

its maximum value and exceeds approximately by 2.5 times $\left(\frac{c_{ya}}{b}\right)_0$

by $\alpha_y = 0$. The obtained data permit to consider the effect of blade setting angles on the ventilation force by forward and reverse rotations of the rotor. Four illustr., three biblio. refs.

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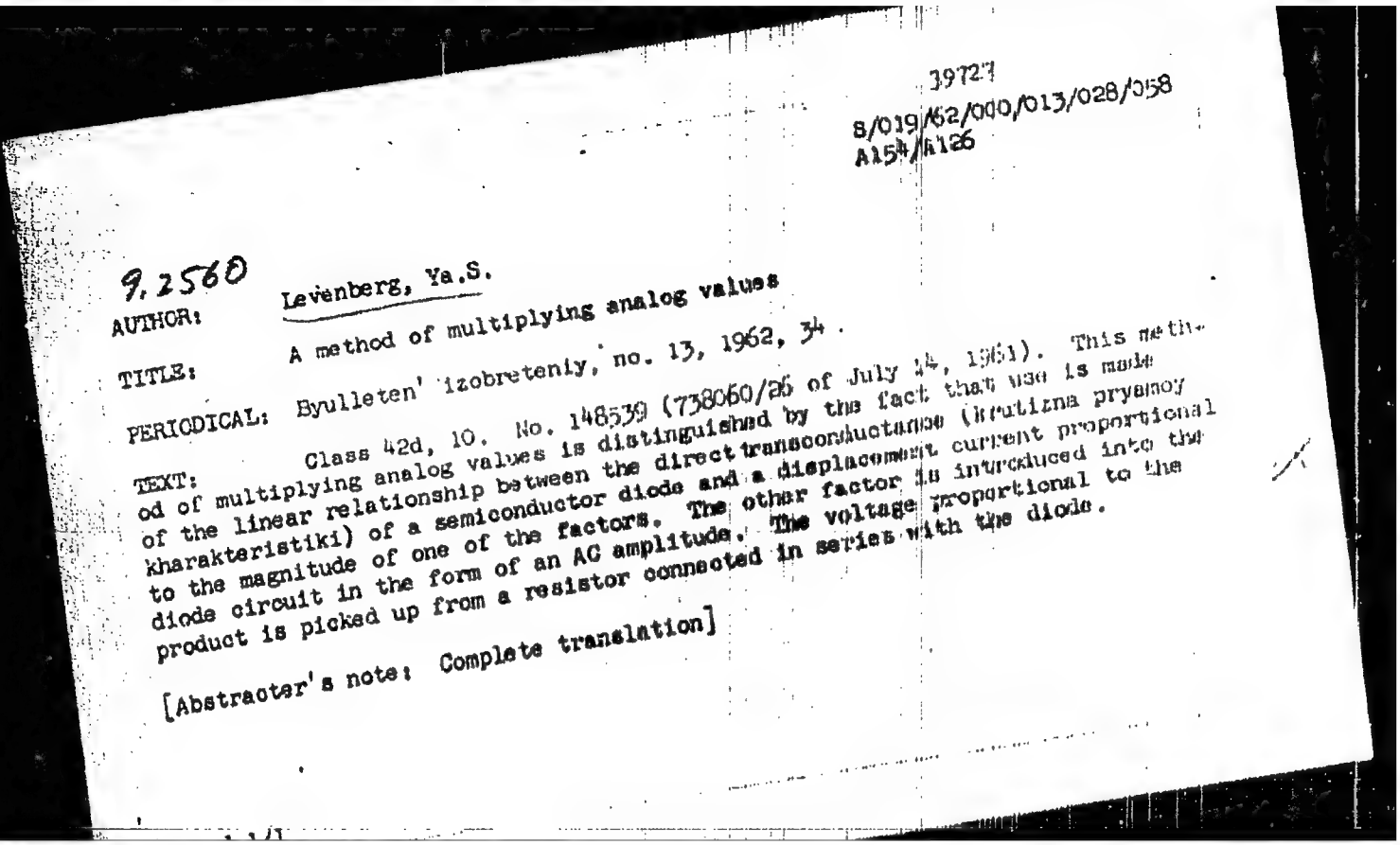

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S/019/62/000/013/028/058
A154/A126

9.2560

AUTHOR: Levenberg, Ya.S.

TITLE: A method of multiplying analog values

PERIODICAL: Byulleten' izobreteniy, no. 13, 1962, 34.

TEXT: Class 42d, 10. No. 148539 (738060/26 of July 14, 1961). This method of multiplying analog values is distinguished by the fact that use is made of the linear relationship between the direct transconductance (krutizna pryamoy kharakteristiki) of a semiconductor diode and a displacement current proportional to the magnitude of one of the factors. The other factor is introduced into the diode circuit in the form of an AC amplitude. The voltage proportional to the product is picked up from a resistor connected in series with the diode.

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

UDC 616-006-092.9-082:6:576.858.5

USSR

STRIZHACHENKO, N. M., GRAYEVSKAYA, N. A., and LEVENBUK, L. [illegible], All-Union Institute of Experimental Veterinary Science, Institute of Poliomyelitis and Virus Encephalitides, and State Control Institute of Medical Biological Preparations imeni L. A. Tarasevich, Moscow

"Some Biological Properties and Morphological Characteristics of a Transplantable Tumor Induced in Hamsters by Bovine Adenovirus Type 3"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 72, No 11, Nov 71, pp 80-82

Abstract: A type 3 adenovirus isolated from a healthy cow was pathogenic for hamsters, producing tumors in them (J. H. Darbyshire, et al., Nature, Vol 211, p 102, 1966; J. Comp. Path., Vol 75, p 327, 1965). The oncogenic strain VBR-1 of the virus in question, which was obtained from Darbyshire, was used in experiments on the transplantation of tumors in hamsters. The tumors (HATH) were highly transplantable; within 5-6 days 100 percent of the implanted cells became adapted to hamsters of any age. The high transplantability was due to an absence of transplantation antigens in the passaged tumors. The initial tumor and the transplanted tumors could be classified as angiogenic sarcomas of the malignant hemangiopericytoma type. The tendency towards formation of

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USSR

STRIZHACHENKO, N. M., et al., Byulleten' Eksperimental'noy Biologii i Meditsiny, Vol 72, No 11, Nov 71, pp 80-82

blood vessels in the tumors was preserved up to the 50-60th passage of the tumor and then disappeared, whereupon the tumors changed to the undifferentiated sarcoma type. The BATH cells underwent more than 60 passages in hamsters. These cells and the tumors produced by them appear to be good models for the study of problems pertaining to virus-induced cancer formation.

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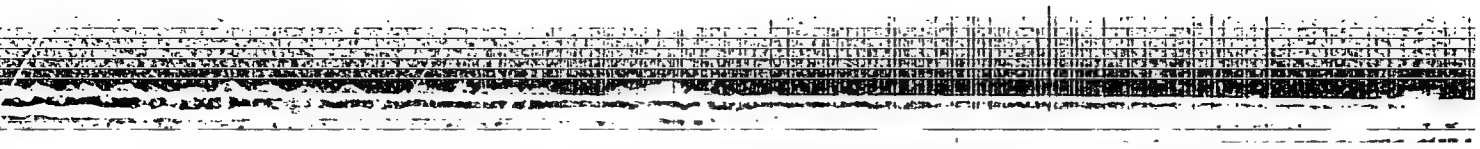

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5

USSR

UDC: 621.372.632

LEVDIKOVA, T. L., DETINKO, V. N.

Kiev, Radioelektronika, Vol 15, No 7, pub 7/, pp [illegible]

Abstract: A method is proposed for calculating the characteristics of a multiple-loop system based on an engineering evaluation of certain circuits with identical resonant peak having small relative [illegible] identical spacing. Necessary engineering and economic parameters are determined for systems made up of two and three coupled single-loop resonators.

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1/2 008 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--CUPOLA FUEL FROM LEAN COALS FROM THE KUZNETSK BASIN -U-

AUTHOR-(05)-RYABICHENKO, A.D., DINEL, V.M., MOSIN, S.V., LEVOIN, V.P., MANUKHOV, A.V.

COUNTRY OF INFO--USSR

SOURCE--LITEINOE PROIZVOD, 1970, (1) 38-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--COAL, SULFUR, COKE, CAST IRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1986/0111 STEP NO--UR/0128/70/000/001/0038/0039

CIRC ACCESSION NO--AP0102201

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201730010-5"

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COKE MADE BY SLOW HEATING OF THE TITLE COAL TO 1000DEGREES WAS EVALUATED IN A CUPOLA FURNACE. IT PRODUCED AN INCREASE IN GAS PERMEABILITY OF THE CHARGE, AND INCREASE IN GAS PERMEABILITY OF THE CHARGE, AN INCREASE IN THE GAS TEMP., A DECREASE IN THE CO-CO SUB2, AN IMPROVED HEAT EXCHANGE, A HIGHER METAL TEMP., AND A LOWER $ CONTENT IN THE PRODUCT.

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USSR UDC 620.172

KOTOV, P. I., LEVEDEV, V. M., MERKULOV, V. N., Moscow

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Abstract: The creep of titanium alloys VT-14 and VT-20 is studied in the 300-400°C temperature range with variable loads. It is demonstrated that with a stepped loading mode, the accumulation of creep deformations occurs slower than the calculated rate, while with a smoothly increasing load, the predictions of the theory of hardening are satisfactorily accurate. In the case of alternating loads and rests, the elastic after effect appears rather clearly during rest periods.

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USSR UDC 532.507

VOLCHKOV, E. P., KOZ'MENKO, V. K., LEVEDEV, V. P.

"Influence of Initial Dynamic Sector on Heat Exchange in a Turbulent Boundary Layer with Injection"

Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 6, 1971, pp 126-131.

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UDC: 621.791.011:669.15-194

USSR

FOMINA, O. P., LEVENBERG, N. Ye., SELEZNEV, A. G., and GERMAN, S. I.; Khar'kov Polytechnical Institute, Kharkov, Turbine Plant

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USSR

FOMINA, O. P., et al, Avtomaticheskaya Svarka, No 11, Nov 70, pp 30-31

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